

PHILIP K. CROSS
JOHN F. ETZEL
WILLIAM G. ULRICH
GORDON T. LANGDON
DAVID E. RANSONE

GERHOLD, CROSS & ETZEL
Registered Professional Land Surveyors
412 DELAWARE AVENUE
TOWSON, MARYLAND 21204

EMERITUS
PAUL G. DOLLENBERG
FRED H. DOLLENBERG
CARL L. GERHOLD

823-4470

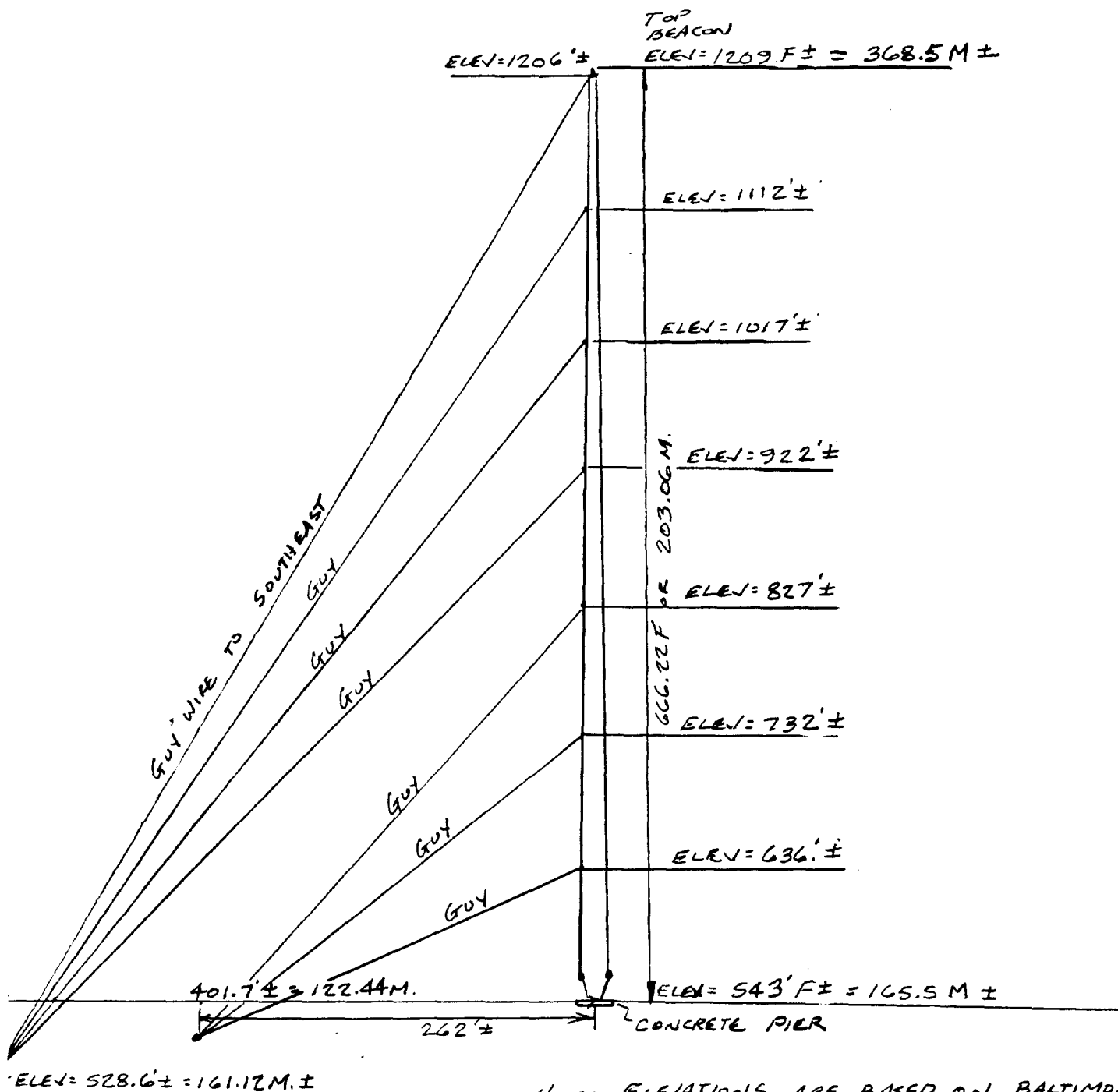
January 24, 1992

I, Donald R. Hall, being duly sworn upon my oath, depose and state that:

I am a Registered Property Line Surveyor in the State of Maryland and employed with the firm of Gerhold, Cross and Etzel of Towson, Maryland.

That on January 9, 1992, I performed the following determination of the tower located at 1200 N. Rolling Road, Catonsville, Maryland, for the purpose of establishing the elevations of the guy wires attached to the said tower and the distances from the centerline of said tower to one of the three sets of guy anchors attached to the tower. The results of the determinations are shown on the attached Exhibit A entitled "Sketch of Tower at 1200 N. Rolling Road, Catonsville, Md.". The elevations stated thereon are based on mean sea level (Baltimore County datum). All elevations stated thereon are within a tolerance of two feet (more or less). All elevations are based on Baltimore County Control Monuments No. X-7798 (elevation 518.18 feet) and No. 12138 (elevation 527.58 feet). All horizontal dimensions thereon are within a tolerance of one foot (more or less).

I certify, under penalty of perjury, the facts noted and



NOTE: ELEVATIONS ARE BASED ON BALTIMORE COUNTY CONTROL MONUMENTS X-7798 (ELEV. 518.18) AND No. 12138 (ELEV. 527.58) AND WITHIN A TOLERANCE OF 2' (MORE OR LESS)

EXHIBIT A

SKETCH OF TOWER
@ 1200 N. ROLLING ROAD
CATONSVILLE, MD.

REVISED 1/24/92
12/30/91 - REVISED 1/20/92
NOT TO SCALE

GÉRHOLD, CROSS & ETZEL
Registered Professional Land Surveyors
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TOWSON, MARYLAND 21204

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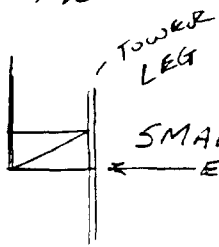
That on January 9, 1992, I performed the following determination of the tower located at 1200 N. Rolling Road, Catonsville, Maryland, for the purpose of establishing the elevations and the nature of the antennae (with the exception of the antennae not yet determined) attached to the said tower. The results of the determinations are shown on the attached Exhibits A and B entitled "Antenna Details and Elevations, Tower located at 1200 N. Rolling Road, Catonsville, Md.". The elevations stated thereon are based on mean sea level (Baltimore County datum). All elevations stated thereon are within a tolerance of two feet (more or less). All elevations are based on Baltimore County Control Monuments No. X-7798 (elevation 518.18 feet) and No. 12138 (elevation 527.58 feet).

I certify, under penalty of perjury, the facts noted and shown hereon are true to the best of my professional knowledge, information and belief.

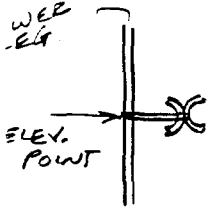


Donald R. Hall
Property Line Surveyor
Md. Reg. No. 221

NOTES: ALL OBSERVATIONS ARE FROM A POINT EAST NORTHEAST
OF THE TOWER

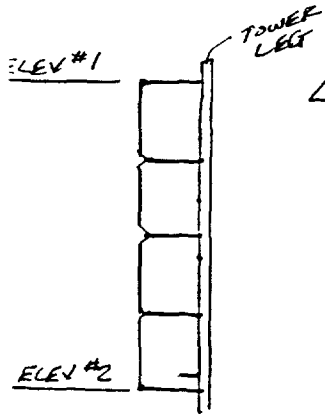


SMALL WHIP ANTENNA - ELEVATION = $1192' \pm 2'$



#2

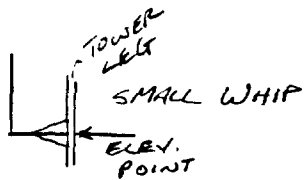
HALF LOOP ANTENNA ELEVATION FIRST = $1171' \pm 2'$
ELEVATION SECOND = $1180' \pm 2'$



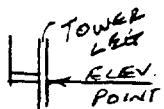
LONG WHIP

ELEVATION #1 = $1173' \pm 2'$

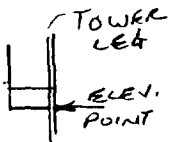
ELEVATION #2 = $1096 \pm 2'$



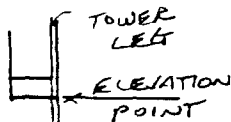
ELEVATION = $1080' \pm 2'$



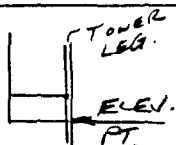
WHIP ELEVATION = $1066' \pm 2'$



WHIP ELEVATION = $1053' \pm 2'$



WHIP ELEVATION = $1044' \pm 2'$



WHIP ELEVATION = $1029' \pm 2'$

EXHIBIT A

ANTENNA DETAILS & ELEVATIONS
TOWER LOCATED AT.
1200 N. ROLLING ROAD
CATONSVILLE, MD.

REV. 1/24/92
1/20/92
NO SCALE

GERHOLD, CROSS & ETZEL
Registered Professional Land Surveyors
412 Delaware Avenue
TOWSON, MARYLAND 21204

ANDREWS OFFICE PRODUCTS CAPITOL HEIGHTS, MD (K)

CATONSVILLE, MD.

LOUISIANA, MISSISSIPPI

COHEN, DIPPELL AND EVERIST, P. C.

**ENGINEERING STATEMENT
RE PETITION TO DENY APPLICATION OF
FOUR JACKS BROADCASTING, INC.
FCC FILE NO. BPCT-910903KE
ON BEHALF OF
SCRIPPS HOWARD BROADCASTING COMPANY**

JANUARY 1992

**COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.**

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

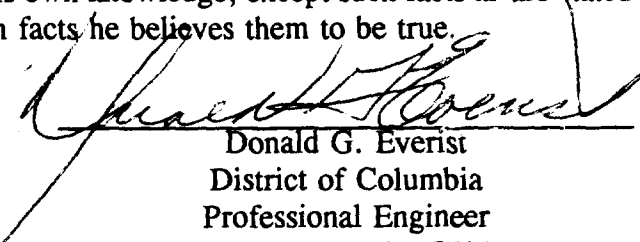
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is Secretary-Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.


Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714

Subscribed and sworn to before me this 24th day of January, 1992.


Notary Public

My Commission Expires: 2/28/93

This engineering statement has been prepared on behalf of Scripps Howard Broadcasting Company ("Scripps"), licensee of WMAR-TV, Channel 2, Baltimore, Maryland in support of its petition to deny the application filed by Four Jacks Broadcasting, Inc. ("FJB"), FCC File No. BPCT-910903KE. The FJB application seeks a construction permit for a new television station to serve Baltimore, Maryland on Channel 2+ (54-60 MHz) with an effective radiated power (ERP) of 100 kW (H&V) and 267 meters antenna height above average terrain. FJB proposes operation from an existing tower currently utilized by WPOC(FM) located at the geographic coordinates:

North Latitude: 39° 17' 13"

West Longitude: 76° 45' 16"

The FJB application is incomplete in several important aspects and demonstrates that the FJB application should be returned since it has not provided an adequate technical presentation for full FCC evaluation.

Protection to FCC Monitoring Station

The FJB application did not address Section 73.1030 of the FCC Rules with reference to protection to the FCC monitoring station near Laurel, Maryland. The attached analysis (Table 1) demonstrates that the FJB application will provide a signal in excess of that permitted in the FCC Rules. Performing the direct-wave calculation, the visual signal will be 103.5 dBu and the aural signal will be 93.5 dBu^{1/}. Each is well above the 80 dBu limit. Further, since the FJB application is silent regarding this very important matter it apparently failed to seek

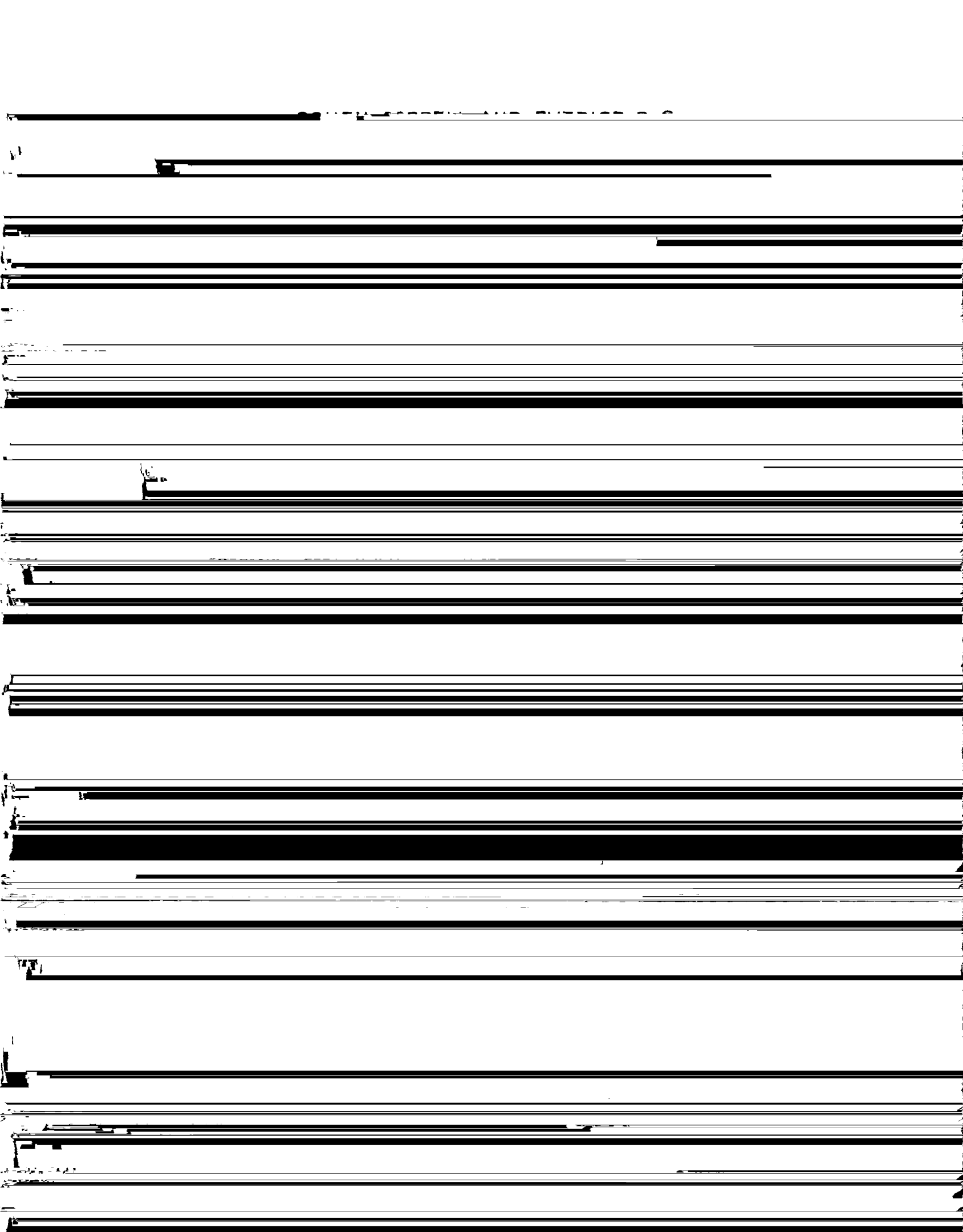
^{1/}Assuming aural power is at 10% of the peak visual power.

advance consultation with the FCC regarding monitoring station protection. Further as disclosed by the FJB application if WPOC is forced to reduce its antenna height above average terrain from 860 feet (262.1 meters) to 767 feet (223.8 meters), a compensating increase in effective radiated power from 16 kW to approximately 23 kW will be required to maintain the full Class B distance to the predicted 60 dBu (1 mV/m) coverage contour. The resultant 1.6 dB increase in direct-wave field at the FCC monitoring station per Section 73.1030(c) of the FCC Rules was not addressed by FJB.

Protection to the monitoring station is important, and the FJB application is deficient.

Antenna Height

The FJB application states that the Federal Aviation Administration ("FAA") was not notified of its proposal since the overall height of the existing tower will not be altered. However, research in this matter (see attached affidavit by Mr. Hall) indicates that the existing tower has an overall height including beacon of 666 feet (203 meters) AGL and 1209 feet (368.5 meters) AGL. This tower previously supported the licensed WBFF-TV Channel 45 pylon antenna with an authorized overall structure height of 1249 feet AMSL. Subsequently, WBFF-TV was authorized to operate from another antenna site and the antenna at the old site was removed. FJB's proposal claims an overall height of 1249 feet AMSL (380.7 meters) in its application. The actual structure is approximately 40 feet (12.2 meters) below that specified in the FJB application and the date of this height reduction is not a matter of record. Since the overall structure height was reduced by the removal of the top-mounted antenna, it is not known whether this structure still qualifies for the height claimed in the FJB application.



required. Due to the required ground surface changes that would result to the environment, Section 1.1307(a)(7) of the FCC Rules and Regulations needs to be fully addressed by FJB.

Further, the proposed FJB operation raises serious concerns with respect to the required protection to workers as specified by the FCC Public Notice dated January 28, 1986. With the addition of the proposed Channel 2 operation at the site which already accommodates other multiple users, FJB has not disclosed how this protection will be met or what precautions will be undertaken. Therefore, it has not fully addressed Section 1.1307(b) of the FCC Rules.

FCC Form 301, Section V-C, Q.14

In the attached report by Vlissides Enterprises, Inc., the photograph depicts users other than WPOC(FM) that operate from the site. The FJB application has not disclosed these other users. Therefore, an assessment required by Section V-C, Q.14 of FCC Form 301 cannot be made. FJB makes reference to the decision (FCC 91-3) released by the FCC January 14, 1991; however, it has neither disclosed what frequencies are operating from the site nor has it made a determination of what frequencies it believes will be impacted. The Channel 2 super turnstile antenna proposed by FJB requires that the WPOC(FM) antenna would be displaced to the 170 meter (558 foot) level of the tower; 28.3 meters (93 feet) below the current position. FJB failed to identify other users and perform a study of the proposed Channel 2 operation upon the multitude of auxiliary user antennas (two-way/radio, paging, etc.) as required by Section V-C, Q.14 of FCC Form 301.

FJB was silent on the intermodulation effects that would result from the proximity of a relocated WPOC antenna with the auxiliary user frequencies. Therefore, FJB has not made an

adequate showing of the overall effect if any of the result of locating the proposed Channel 2 operation at this site. Similarly, the interaction of Channel 2 with the auxiliary user frequencies was not addressed.

TABLE 1
FCC MONITORING STATION PROTECTION
LAUREL, MARYLAND
JANUARY 1991

Predicted Channel 2 television field strength values at the protected FCC field office at Laurel, Maryland per Section 73.1030(c) of the FCC Rules.

Four Jacks Broadcasting, Inc. Proposed Channel 2 Operation:

<u>FJB Coordinates</u>	to	<u>FCC Monitoring Station</u>
N 39° 17' 13" - W 76° 45' 16" per application		N 39° 09' 54" - W 76° 49' 17" per 0.121(c) of the FCC Rules
Four Jacks Site to Field Office:		14.72 km, N 203.1°E
Predicted Unattenuated or "Direct-Wave" Field: and		103.5 dBu (visual); 150 mV/m 93.5 dBu (aural); 47 mV/m

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CARL L. GERHOLD


January 20, 1992

I, Donald R. Hall, being duly sworn upon my oath, depose and state that:

I am a Registered Property Line Surveyor in the State of Maryland and employed with the firm of Gerhold, Cross and Etzel of Towson, Maryland.

That on December 30, 1991, I performed the following determination of the tower located at 1200 N. Rolling Road, Catonsville, Maryland, for the purpose of establishing the overall height of the tower (including lighting). My work concluded that the tower is 666 feet (203 meters) above the top of the concrete pier in height with an elevation at the top of the lighting of 1209 feet (368.5 meters) above mean sea level (Baltimore County datum). The elevation at the top of the one to two foot high concrete pier is 543 feet (165.5 meters). All elevations and heights stated herein are within one foot (more or less). All elevations are based on Baltimore County Control Monuments No. X-7798 (elevation 518.18 feet) and No. 12138 (elevation 527.58 feet).

I certify these facts stated are true of my own knowledge, except such facts as are stated to be on information and belief, and as to such facts, I believe them to be true.



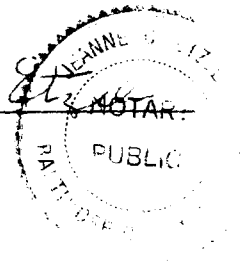
Donald R. Hall
Property Line Surveyor
Md. Reg. No. 221

Subscribed and sworn to before me this 23RD day of January, 1992.



Notary Public

My Commission expires: August 1, 1992



DISTRICT OF COLUMBIA) ss

AFFIDAVIT OF MICHAEL L. MOORE

I, Michael L. Moore, have been retained by Scripps Howard Broadcasting Company. I am an Airspace and Procedures Specialist and I was formerly employed by the Federal Aviation Administration for twenty-two years. For the past nine (9) years, I have been routinely employed as an independent aeronautical consultant. I am familiar with the provisions of the Federal Regulations, Part 77, Objects Affecting Navigable Airspace, FAA Handbook 8260.3B, Terminal Instrument Procedures (TERPS) and FAA Handbook 7400.2C, Procedures for Handling Airspace Matters.

I have reviewed the application of Four Jacks Broadcasting, Inc. for a new television (TV) station, Channel 2, in Baltimore, Maryland, as prepared and supported by the Carl T. Jones Corporation dated August 29, 1991.

Based upon my evaluation:

1. The proposed Channel 2 antenna support structure, currently supporting the WPOC(FM) antenna is located directly under the primary ILS approach areas for both the ILS Rwy 15L and ILS 15R precision approach procedures to the BWI Airport. It lies within close proximity to the Glide Path Intercept Points (GPIP) for both Approach procedures. It lies only 1295 feet below the nominal (3.0°) glide slope for the

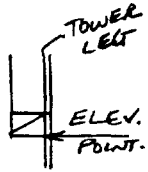
ILS Rwy 15L approach and only 192 feet below the associated obstacle clearance surface (34:1). Also, it lies only 358 feet from the runway 15L centerline extended.

2. The proposed alteration to the existing WPOC(FM) supporting structure is NOT physically SHIELDED by the neighboring 1505-foot AMSL antenna tower as would be permitted by the exceptions listed in FAR Part 77.15. This is because:
 - a. The proposed tower is not located within 500 feet of the taller 1505-foot tower, and
 - b. It is not shielded on 3 sides, and
 - c. It is not located within the shadow of the 1505-foot tower. Instead, it is located on the airport side of the tower. The shadow of the 1505-foot tower projects in the opposite direction, away from the airport.

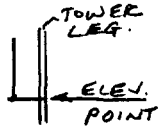
The obstruction standards of FAR 77, Subpart C, relate to physical obstructions and do not rule out the requirement to give Notice to the FAA when potential electromagnetic interference is an issue.

The FAA has published its proposed changes to the Part 77 rules. The comment period for this proposed change closed on December 31, 1990. The FAA is now in the adoption phase of the FAR 77 proposal. The proposed rules emphasize and strengthen the requirement for Electromagnetic Interference (EMI) evaluations. It is expected that the FAA and the FCC will develop a common electromagnetic evaluation process.

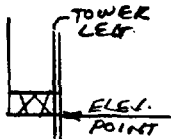
NOTE: ALL OBSERVATIONS ARE FROM POINT EAST NORTHEAST OF THE TOWER



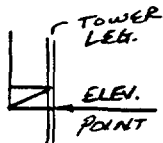
WHIP ELEVATION = $945' \pm 2'$



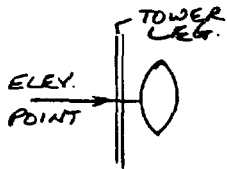
WHIP ELEVATION = $935' \pm 2'$



WHIP ELEVATION = $918' \pm 2'$

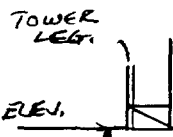


WHIP ELEVATION = $906' \pm 2'$



CENTER OF DISH ELEVATION = $774' \pm 2'$

NOTE: OBSERVATIONS ARE FROM A POINT NORTH OF THE TOWER.



WHIP ELEVATION = $832' \pm 2'$

If Notice of the proponent's change in electromagnetic operation of the WPOC support structure were to be given to the FAA as required by FAR 77, the FAA would evaluate the EMI effect of the Channel 2 frequency on their navigation facilities and, in addition, would evaluate the increase in the overall height of the structure as a physical obstruction to navigation^{1/}.

Such an EMI evaluation will include, but will not be limited to:

- a. The introduction of new equipment and a new radio frequency (VHF Channel 2) certainly requires Notice to the FAA in accordance with the following regulations and directive (in part):

1. FAR Part 77.5(a) and (b) require Notice for alterations of "equipment or materials used therein." This requirement continues in FAR Subpart 77.11(a) and (b).

^{1/} On November 25, 1991, Nationwide Communications Inc. licensee of WPOC(FM) notified the FAA that the tower height had been reduced (see attached exhibit abstracted from the filing dated November 27, 1991).

2. Numerous FAR Part 77 Notice requirements, as well as the requirements in FAA Handbook 7400.2C, continuously refer to the "effect of construction or alteration on operational procedures" and the "operational effect on air navigation facilities". Accordingly, the requirements of these documents are not limited to simply the physical effect of obstructions to navigation but also the electromagnetic effect of placing a new TV Channel 2 directly under the ILS approach paths at the BWI Airport. Such an alteration must be regarded as having an adverse effect on operational procedures at BWI unless the FAA determines otherwise by means of a study.
- b. If the WPOC(FM) antenna system is modified to accommodate the proposed Channel 2 operation, then WPOC(FM) will also be subject to an FAA EMI evaluation.

For all of the above-stated reasons, it is clear to me that the Four Jacks application requires an aeronautical study by the FAA.



Michael L. Moore

Subscribed and sworn to before me this 27th day of January, 1992.



Notary Public

My commission expires: _____

NADINE R. McLACHLAN
NOTARY PUBLIC DISTRICT OF COLUMBIA
My Commission Expires October 31, 1993

